Message

From: Nelson, Leverett [nelson.leverett@epa.gov]
Sent: 10/4/2018 5:11:14 PM
To: Klassman, Debra [klassman.debra@epa.gov]
Subject: FW: Follow-up on isotope question

FYI re: Armenia Growers.

From: Holst, Linda
Sent: Thursday, October 04, 2018 11:12 AM
To: Ross, David P <ross.davidp@epa.gov>
Cc: Stepp, Cathy <stepp.cathy@epa.gov>; Forsgren, Lee <Forsgren.Lee@epa.gov>
Subject: Re: Follow-up on isotope question

Understood. In the sandy soils in Juneau County, nitrogen moves rapidly into the subsurface and groundwater and travels downgradient towards Lake Petenwell. Estimates of groundwater flow range from 0.5 to 1.0 feet per day to several feet per day. Most of our sample locations were immediately downgradient and adjacent to irrigated fields so the nitrate we detected was likely introduced to the field within the last few years. The samples collected downgradient of Central Sands Dairy were approximately 3,000' from the facility, so staff estimate that the nitrates detected were likely introduced to the subsurface anywhere from 2-10 years ago. These are rough estimates based only on groundwater flow velocity.

Thanks,

Linda

Acting Director|Water Division|EPA Region 5
(312) 886-6758|holst.linda@epa.gov

On Oct 4, 2018, at 10:06 AM, Ross, David P <ross.davidp@epa.gov> wrote:

> Thanks Linda. Precision is important in these matters. Sound science includes understanding uncertainty in that science.
>
> Dave
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> Sent from my iPad
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> On Oct 4, 2018, at 9:50 AM, Holst, Linda <holst.linda@epa.gov> wrote:
>
> > Staff followed up with the professor at the University of Nebraska and the nitrate isotopes will not differentiate between legacy and modern fertilizer sources.
> >
> > Linda Holst | Acting Director, Water Division| U.S. EPA Region 5, 77 West Jackson Blvd., W-15J, Chicago, IL 60604 | Ph. (312) 886-6758 | holst.linda@epa.gov